

1612
PATENT

Attorney Docket No. AR218-X

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of
HAMILTON, NORMAN, WU
Filed: December 3, 1998
Serial No: 09/204,236



Examiner: Celia Chang

Group: 1612

#7
RECEIVED

OCT 12 1999

TECH CENTER 1600/2900

For: N-LINKED SULFONAMIDES OF HETEROCYCLIC CARBOXYLIC ACIDS OR
CARBOXYLIC ACID ISOSTERES

TRANSMITTAL LETTER

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Submitted herewith for filing in the U.S. Patent and Trademark
Office are the following:

- 1) Transmittal Letter;
- 2) Second Supplemental Information Disclosure Statement;
- 3) Form PTO-1449; and
- 4) Ninety (90) References Cited.

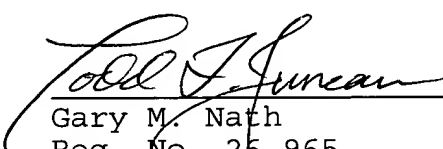
The Commissioner is hereby authorized to charge any fee
deficiency or credit any overpayment to our Deposit Account
No. 14-0112.

Respectfully submitted,

NATH & ASSOCIATES

Date:

October 8, 1999



Gary M. Nath
Reg. No. 26,965
Todd L. Juneau
Reg. No. 40,669

NATH & ASSOCIATES

1030 Fifteenth Street, N.W.
Sixth Floor
Washington, D.C. 20005-1503
Tel: (202) 775-8383
Fax: (202) 775-8396

GMN:TLJ:CDN:MLM:\AR218X.2s.IDS.TL

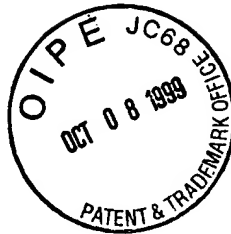
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

HAMILTON, NORMAN, WU

Serial No. 09/204,236

Filed: December 3, 1998



Examiner: Celia Chang

Group: 1612

For: N-LINKED SULFONAMIDES OF HETEROCYCLIC CARBOXYLIC ACIDS OR
CARBOXYLIC ACID ISOSTERES

THIRD SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Pursuant to Applicants' duty of disclosure under 37 C.F.R. §§1.56 and 1.97-1.99, the documents listed on the attached Form PTO-1449 are being brought to the attention of the Examiner in charge of the captioned application. No fee is included with this submission, because it is submitted before an Official Action on the merits has been mailed by the U.S. Patent and Trademark Office. Copies of the documents are attached herewith.

This second supplemental IDS cites references which are relevant to the proviso species of claim 1. For the Examiner's convenience, a copy of the provisos from claim 1 follow, wherein the relevant Form PTO-1449 reference numbers [e.g. AC, BG, etc.] are included in parentheses after the corresponding proviso species.

Proviso from claim 1:

A. provided that:

when D is a bond, and R₂ is COOH,

then R_1 cannot be substituted naphthyl;

B. further provided that:

when D is a bond, and n is 1, and R_2 is COOH or CONHR_3 , then R_1 is not hydroxyl, methyl, ethyl, substituted or unsubstituted thioethyl, benzothiazole, substituted benzopyran, substituted benzopyrrole, substituted benzoxazole, substituted 5-membered heterocycle containing two N and one S heteroatoms, or substituted or unsubstituted phenyl, phenylethyl, naphthyl, pyridyl, thienyl, quinoline, tricyclic ring, aminoethyl, or benzyl;

C. further provided that:

when D is a bond, and n is 2, and R_2 is COOH or phenylbutyl ester, then R_1 is not substituted phenyl, or a substituted bicyclic ring containing two oxygen heteroatoms.

D. further provided that:

when D is a bond, and n is 1-2, and R_2 is a substituted or unsubstituted carbocyclic or heterocyclic ring structure, then R_1 is not substituted or unsubstituted carbocycle or heterocycle, or hydroxy;

E. further provided that:

when D is a bond, and n is 1-2, and R_2 is hydroxy, alkoxy, $-\text{SO}_2(\text{phenyl})$, $\text{N}(\text{R}_3)_2$, substituted thio or alkylthio, $-\text{NCO}$, $-\text{PO}_3(\text{Me})_2$, or $-\text{NCOOC}(\text{ethyl})\text{phenyl}$, then R_1 is not naphthalene,

ethylene, substituted tricyclic ring, or substituted or unsubstituted phenyl;

F. further provided that:

when D is C₁-C₃ alkyl or hexenyl, and R₂ is hydroxyl, then R₁ is not substituted or unsubstituted, or benzoimidazole;

G. further provided that:

when D is methyl, and n is 1, and R₂ is cyano or COOH, then R₁ is not substituted phenyl;

H. further provided that:

when D is methyl, and n is 1, and R₂ is methoxy or N(R₃)₂, then R₁ is not methyl, ethyl, phenylethyl, chloro substituted alkyl, substituted oxirane, substituted aziridine wherein one of the carbons is replaced with an oxygen, substituted or unsubstituted propenyl, substituted phenyl, benzyl, or trifluoro substituted C₂-C₃ alkyl or alkenyl;

J. further provided that:

when D is ethyl, and n is 2, and R₂ is hydroxyl or N(R₃)₂, then R₁ is not naphthyl;

K. further provided that:

when D is propyl, and n is 1, and R₂ is methoxy, then R₁ is not ethylene, cyano substituted ethyl, or

triethoxy substituted propyl;

L. further provided that:

when D is not a bond and at least one of D and R₂ contains at least one S or O, then R₁ is not methyl or substituted phenyl.

The following IDS references contain biological information that the Examiner may find relevant for reviewing the subject matter of the present invention.

MM - Central nervous system stimulants.

OP, PA - Cholinergic agonists.

PI - Muscarinic activity.

Additional abstract references are disclosed herein which refer to species that are deemed to be cumulative with respect to the relevant references noted above for the proviso species. These cumulative are grouped by relevant proviso as follows:

AE, AH, AJ, AM, BA, BB, BF, BG, BH, BM, BN, BO, CA, CB, CJ, CM, CN, DA, DC, DH, DI, EB, EC, EJ, EL, EO, FB, FC, FD, FL, FO, GF, GL, GO, HB, HI, HO, IA, IB, IC, IE, IG, IH, II, IJ, IN, IO, JB, JC, JD, JF, JG, JH, JI, JM, JN, JO, KB, KF - Proviso A.

AA, AB, AC, AD, AF, AG, AI, AK, AL, AN, BC, BD, BE, BI, BJ,

BK, BL, CC, CD, CF, CG, CH, CI, CJ, CK, CL, DB, DD, DE, DF, DJ, DK,
DL, DN, DO, ED, EE, EF, EG, EH, EI, EK, EM, EN, FA, FE, FF, FJ, FM,
FN, GD, GE, GG, GH, GJ, GK, GM, GN, HA, HC, HD, HE, HF, HG, HH, HJ,
HK, HL, HM, HN, IF, IK, JA, JE, JJ, JK, JL, KA, KC, KD, KE, KG, KH,
KI, KJ, KK, KL, KN, KO, LA, LB, LC, LD, LE, LG, LH, MC, MD, MO, DG,
DM, EA, FG, FH, FI, FN, GA, GB, GC, GI, KM - Proviso B.

CE, IL, IM, JJ, JL, KA, KE - Proviso C.

MF, MG, LF, LI, LJ - Proviso D.

LL, LM, LN, LO, LP, LQ, MA, LK, MB, ME, MH, MI, MJ, MK, ML,
MM, MN - Proviso E.

NE, NJ, OI, OK, PE, PJ, QI, QK, QL, QN, QO, PH,
PM - Proviso F.

PD, PB, PL, QA, MP, NA, NB, NE, NF, NG, NI, NJ, NL, NO, OB,
OC, OD, OE, OF, OH, OJ, OK, OM, OO, PC, PF, PG, PJ, PK, PO, QE, QF,
QI, QK, QM, QN, QO, RA - Proviso K.

Additional references are disclosed herein which refer to
species that are to be excluded from the scope of claim 1 by
amendment. These additional references are [FK, ID, MQ, NB, NC,
ND, NH, NK, NM, NN, NO, NP, OA, OF, OG, OL, ON, OP, PA, PB, PI, PL,

PN, PP, QB, QC, QD, QG, QH, QJ, QK, RB].

The Examiner is respectfully requested to cite the documents listed on the attached Form PTO-1449 in the next Office Action. In so doing, the Examiner is respectfully requested to initial in the space adjacent to the listing of each document on the Forms PTO-1449, and return a copy of the initialed Form PTO-1449 with the next communication to Applicants, to confirm that these documents have been considered by the Examiner and made of record in this application.

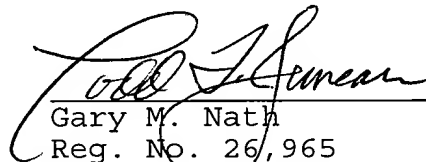
If the Examiner has any questions or wishes to discuss this application, kindly telephone the undersigned attorney.

Respectfully submitted,

NATH & ASSOCIATES

Date:

October 8, 1999



Gary M. Nath
Reg. No. 26,965
Todd L. Juneau
Reg. No. 40,669

NATH & ASSOCIATES

1030 Fifteenth Street, N.W.
Sixth Floor
Washington, D.C. 20005-1503
Tel: (202) 775-8383
Fax: (202) 775-8396